

Docket No. 74 819-000715
Serial No. 10/018,369
Page 5

REMARKS

The Official Action, dated June 17, 2004, has been received and its contents carefully noted. In view thereof, filed concurrently herewith is a Request for Continued Examination. Along with the foregoing Preliminary Amendment wherein claim 9 has been cancelled and claims 8, 10 and 11 have been amended. Accordingly, it is respectfully requested that the foregoing amendments be entered and fully considered by the Examiner. Furthermore, claims 8 and 10-14 are presently pending in the instant application.

With reference now to the Official Action, it is noted that claims 8-14 have been subjected only to rejections under 35 U.S.C. 112, first and second paragraph, and the claims have not been rejected based on prior art. In this regard, with reference to page 2 of the Office Action, claims 8-14 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner is of the position that the claims contain subject matter which was not described in the specification in such way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Specifically, the Examiner is unable to find support for the step successively heating while reducing the pressure as recited in claim 8 or a step of feeding while reducing the pressure. In this regard, as can be seen from the foregoing amendments, each of claims 8 and 11 have been amended in order to delete reference to the term "successively". Independent claim 8 is directed to a method for manufacturing an optical fiber preformed using a rod-in-tub method comprising the steps of a) inserting a glass rod into a glass pipe and setting a pressure reduction level in the glass pipe, b) heating the glass pipe and the glass rod in a longitudinal direction and c) causing the glass pipe to collapse in the longitudinal direction

NVA305162.1

BEST AVAILABLE COPY

Docket No. 740819-000715

Serial No. 10/018,369

Page 6

due to the heating, and elongating the unified glass pipe and glass rod in the longitudinal direction until the outer diameter of the glass pipe becomes a predetermined diameter, wherein in the step c), a position at which the glass pipe and/or the glass rod are elongated is longitudinally upstream of a position at which the glass pipe is caused to collapse on the glass rod, and further in the step c) the pressure reduction level is set so as to satisfy the equation $0.1 \leq L1/(L1+L2) \leq 0.8$, where L1 is length from the position at which the glass pipe and/or the glass rod are elongated to the position at which the glass pipe is caused to collapse on the glass rod, and L2 is the length from the position at which the glass pipe is caused to collapse on the glass rod to a position at which the outer diameter of the glass pipe becomes a predetermined diameter. It is respectfully submitted that Applicants' claimed invention as set forth in independent claim 8 is clearly supported by Applicants' specification.

Specifically, the Examiner's attention is directed to page 11, line 28, to page 12, line 2, wherein it is stated that the inventors have found that optimum manufacturing conditions can be set if the distance with respect to the longitudinal direction of the glass pipe and glass rod is utilized instead of regulating the above mentioned pressure reduction level. Further, on page 23, line 12, to page 24, line 1, page 24, lines 7-10 and Figures 1, 2 and 4 of the present application clearly set forth support the steps set forth in claim 8 as amended.

In accordance with the foregoing amendments, independent claim 8 has been amended in order to clarify that in the step of causing the glass pipe to collapse and elongating the unified glass pipe and glass rod, the position at which the glass pipe and/or the glass rod are elongated is above the position at which the glass pipe is caused to collapse onto the glass rod. Furthermore, independent claim 8 has been amended in order to specifically set forth that the pressure reduction level in the glass pipe is set to satisfy the predetermined

NVA305162.1

Docket No. 741 819-000715

Serial No. 10/018,369

Page 7

equation. As the Examiner notes, in the sentence spanning pages 24 and 25, with reference to Figure 4, a value of $L1/(L1+L2)$ was changed by altering the pressure reduction level within the glass pipe 1. Furthermore, with reference to page 26 of the specification it is noted that Figure 8 is a diagram based on Figures 4 and 5 in which the value of $L1/(L1+L2)$ is plotted along the horizontal axis, and the number of bubbles formed in the optical fiber preform and the amount of the core eccentricity of the optical fiber plotted along the vertical axis. From Figure 8, it can be seen that if the value of $L1/(L1+L2)$ is at least 0.1 and not more than 0.8, then the formulation of bubbles and core eccentricity are both prevented. Accordingly, it is respectfully submitted that support is clearly provided for that which is presently set forth by Applicants' claimed invention in independent claim 8 wherein the pressure reduction level is set to satisfy the equation $0.1 \text{ is less than or equal to } L1/(L1+L2) \text{ less than or equal to } 0.8$. Accordingly, in view of the foregoing comments it is respectfully submitted that Applicants' claimed invention has set forth in independent claim 8 is clearly supported by the specification and in proper condition for allowance.

With reference now to independent claim 11, this claim recites a method for manufacturing an optical fiber preform using a rod-in-tube method comprising the steps of a) inserting a glass rod into a glass pipe and adjusting a pressure reduction level in the glass pipe, feeding the glass pipe and the glass rod in a longitudinal direction into a heating furnace and causing the glass pipe to collapse in the longitudinal direction due to the heating of the glass pipe and the glass rod in the longitudinal direction in the step b) and elongating the unified glass pipe and glass rod in the longitudinal direction until the outer diameter of the glass pipe becomes a predetermined diameter, wherein a cross section area of the glass rod is smaller than a cross section area required for the glass pipe and the step of feeding is performed so as to satisfy the equation $1 \text{ is less than } V_R/V_P \text{ which is less than or equal to } 2$,

NVA305162.1

Docket No. 74-819-000715

Serial No. 10/018,369

Page 8

where V_R is the feed rate of the glass rod and V_P is the feed rate of the glass pipe. Accordingly, as can be seen from the foregoing amendments, independent claim 1 no longer recites feeding the glass pipe and glass rod while reducing the pressure. Furthermore, support for independent claim 11 as amended is clearly found at page 23, line 12, to page 24 line 1, page 28, lines 13-41 and Figures 1, 10 and 16 of the present specification. Accordingly, it is respectfully submitted that Applicants' claimed invention is clearly supported by the specification as originally found and no new matter has been added.

With reference to page 4 of the Office Action, claims 8-14 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as the invention. As can be seen from the foregoing Amendments, those instances of indefinites noted by the Examiner have been amended and/or removed, consequently, it is respectfully submitted that Applicants' claimed invention has set forth in each of independent claims 8 and 11 as well as those claims which depend therefrom are in proper formal condition for allowance.

With respect the use of the term "and/or", in independent 8, this phrase is utilized in referring to the position of the glass pipe and/or glass rod. It is respectfully submitted that independent claim 8 particularly points out distinctively claims of subject matter which Applicants' regards as the invention in that it is clear from the claimed invention that it is a position at which the glass pipe and/or the glass rod are/is elongated is longitudinal upstream from a position in which the glass pipe is caused to collapse on the glass rod. Accordingly, it is respectfully submitted that Applicants' claimed invention as set forth in each of independent claims 8 and 11 as well as those claims which depend therefrom are now in proper formal condition for allowance.

NVA305162.1

Docket No. 741819-000715

Serial No. 10/018,369

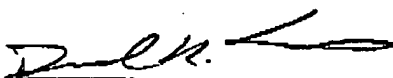
Page 9

Further on page 5 of the Office Action the specification has been objected to as failing to provide proper antecedent basis for the claimed subject matter. Particularly, the Examiner of the position that there is no mention of the "successively" feeding, the collapse "successively" or the "successively" elongating as recited in the claims. As can be seen from the foregoing Amendments, reference to the term "successively" has been removed from each of independent claims 8 and 11, and consequently noted it is respectfully submitted that the specification are now in proper formal condition for allowance.

Therefore, in view of the foregoing, it is respectfully requested that the objections and rejections of record be reconsidered and withdrawn by the Examiner, that claims 8 and 10-14 be allowed and that the application be passed to issue.

Should the Examiner believe a conference would be of benefit in expediting the prosecution of the instant application, he is hereby invited to telephone counsel to arrange such a conference.

Respectfully submitted,



Donald R. Studebaker
Registration No. 32,815

NIXON PEABODY LLP
Suite 900, 401 9th Street, N.W.
Washington, D.C. 20004-2128
(202) 585-8000

NVA305162.1

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.